

Image: Wikipedia/LennartBolks



## Impacts of automated taxi systems among other modes

### Problem description

Developments in vehicle automation may contribute to a paradigm shift from privately-owned vehicles to on-demand mobility-as-a-service. Implementation of a system of self-driving taxis may radically alter our daily mobility. We would like to know more about what such a future would look like. While there have been modelling studies of self-driving taxi systems, these are often limited in scale, and interactions with other modes of transportation are often neglected, leading to an incomplete picture of said future.

### Objectives & Assignment

The study investigates how the introduction of an automated taxi system changes the operation of the larger transportation system. This includes the impacts on pre-existing modes and road congestion. To assess the impacts quantitatively, the student will use a quasi-dynamic traffic assignment model developed at TU Delft. This macroscopic model must be linked with an agent-based representation of the taxi fleet and a plausible mode choice model for travellers. The student will select a case study to apply the overall model and see what lessons we can learn about the viability of automated taxis. Potentially, different operation strategies of the overall mixed road traffic system can be compared here.

### Research group

Transport & Planning Department

### External support

Your research will be part of the STAD research project. An internship position at one of the STAD partners may be available.

### Information

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